

$$\textcircled{23} \quad x^4 + 10x^2 + 9 \rightarrow x^2 + 10x + 9$$

$$(x^2 + 1)(x^2 + 9) \quad (x + 1)(x + 9)$$

$$\textcircled{25} \quad x^4 - 4x^3 + 8x^2 - 16x + 16 \quad \frac{\pm 1, \pm 2, \pm 4, \pm 8, \pm 16}{\pm 1}$$

$$1 \left| \begin{array}{ccccc} 1 & -4 & 8 & -16 & 16 \\ & 1 & -3 & 5 & -11 \\ \hline 1 & -3 & 5 & -11 & 5 \end{array} \right.$$

$$4 \left| \begin{array}{ccccc} 1 & -4 & 8 & -16 & 16 \\ & 4 & 0 & 32 & 64 \\ \hline 1 & 0 & 8 & 16 & 80 \end{array} \right. \quad \begin{array}{l} \text{upper} \\ \text{bound} \end{array}$$

$$2 \left| \begin{array}{ccccc} 1 & -4 & 8 & -16 & 16 \\ & 2 & -4 & 8 & -16 \\ \hline 1 & -2 & 4 & -8 & 0 \end{array} \right. \quad \begin{array}{l} \text{zero } 2 \\ (x-2) \end{array}$$

$$2 \left| \begin{array}{cccc} 1 & -2 & 4 & -8 \\ & 2 & 0 & 8 \\ \hline 1 & 0 & 4 & 0 \end{array} \right. \quad \begin{array}{l} \text{zero } 2 \\ (x-2)(x-2) \end{array}$$

$$x^2 + 4 = 0$$

$$\sqrt{x^2} = \sqrt{-4}$$

$$y = \pm 2i$$

$$(x-2)(x-2)(x-2i)(x+2i)$$

$$\text{zeros } 2, 2, 2i, -2i$$

Do Stations #1-5 in class

Homework

- Do the homework you didn't do last time
- Sect. 2.5 # 30-34(2), 39⁺, 45-52(3), 63-66 by hand